

REMARKS

No claims are amended. Claims 1 through 21 are presented for reconsideration by the Examiner in view of the following remarks.

Interview Summary

Counsel for the applicant conducted an interview with the Examiner on August 5, 2005. The topics discussed during the interview are as follows:

- 1) The difference between the claim language "cylindrical surface parallel to said longitudinal axis" and the disclosures of Johnson;
- 2) Support for the Examiner's statement that "drawings are good for what they show"; and
- 3) The completeness of the Examiner's final rejection.

Argument

Applicant points out that Johnson teaches only the production of tapered pins. The intermediate stages of pin production are shown in Figures 2 and 6, while the final product is shown in Figures 4 and 8. Figures 5 and 9 are end views of the tapered pins of Figures 4 and 8, respectively. Johnson does not teach a pin having land surfaces configured as recited in independent claims 1, 10, and 21. Claims 1 through 21 are not anticipated by Johnson.

Applicant recites specific ratios and relationships in dependent claims 2, 4, 7 and 8.

Applicant wishes to particularly emphasize the proportions recited in claims 7 and 8. Claim 7 requires that "a majority of each of said lands has a substantially uniform height extending above said first diameter and the width of said land is at least five times said height." Claim 8 requires "a majority of each of said lands has a substantially uniform height extending above said first diameter and the width of said land is between 5 and 15 times said height." The "first diameter" recited in these

claims is the "first diameter" of the "cylindrical stock" recited in claim 3. The width/height ratio recited in these claims is measured with respect to the cylindrical stock from which the pin is formed.

An aspect of the present invention relates to the width, w , of the lands when measured perpendicular to the pin length versus the height, h_1 , of the land relative to the pin stock diameter, d_1 . See Figure 3. The invention discloses low profile/broad cylindrical land surfaces. These, as disclosed in the specification, low profile/broad cylindrical land surfaces have two primary functions. First, the reduced height and increased width of the land surfaces provide a more robust engagement feature for frictional contact with the inside surface of a hole in a hard host material. As discussed in great detail, and demonstrated in Figure 7 through 9, as well as the experimental results discussed in Table 1 on page 8 of Applicant's specification, the claimed land surfaces are superior to prior art engagement features. The art cited by the Examiner does not disclose, teach, or suggest cylindrical land surfaces having the proportions recited in the claims 4, 7 and 8. The unexpectedly superior performance of the claimed land surfaces is amply disclosed in Applicant's specification. Claims 4, 7 and 8 are patentable over Johnson for at least this additional reason.

Applicant requests support for "drawings are good for what they show"

In his final rejection the Examiner repeatedly states "Examiner notes that the drawings are good for what they show". The Examiner cites no case precedent or MPEP support for this statement. Applicant has pointed out MPEP § 2125 entitled Drawings as Prior Art. A subtitle of this section states "proportions of features in a drawing are not evidence of actual proportions when drawings are not to scale." This subsection cites several cases in support of this premise. The Examiner's use of the drawings in Johnson to anticipate the recitations of applicant's claims fail for at least three reasons:

- 1) Johnson teaches only tapered pins and does not teach the production of a pin having cylindrical land surfaces as claimed by applicant;

- 2) The drawings of Johnson are not to scale and the enlarged portion of Figure 9 pointed out by the Examiner teaches at best a width to height ration of 3 to 1 where applicant is claiming a proportion of at least 5 to 1; and
- 3) The drawings of Johnson are not indicated as being drawn to scale and thus according to MPEP § 2125 cannot be used to teach the proportions claimed by applicant.

Claims 10 - 20

Claim 10 recites in pertinent part:

a pin for insertion into said hole, said pin having a second hardness less than said first hardness and a retaining surface at a second diameter larger than said first diameter, said retaining surface defined by a plurality of lands having a width separated by a plurality of grooves of approximately equal width,

wherein at least a portion of each land includes a cylindrical surface parallel to said longitudinal axis at a substantially uniform radial distance from said longitudinal axis.

Johnson teaches nothing about the relative hardness of the pin and the host material. As shown in applicant's experimental results a hard host material deforms or removes the spiral land or tooth-like projecting surfaces of pins having a typical hardness less than the host material. Johnson further fails to disclose, teach, or suggest the recitations of the final paragraph of claim 10. Johnson teaches only a tapered pin and does not disclose, teach, or suggest cylindrical land surfaces as recited in claim 10. Claim 10 is not anticipated or obvious in view of Johnson.

Claims 11-20 depend from claim 10 and are patentable for at least the reasons stated in support of claim 10.

Claim 11 requires that "said second diameter" (the retaining surface) is "no more than approximately 4% larger than said first diameter" (of the hole). Johnson does not disclose, teach or suggest this relationship between pin and host. Claim 11 is patentable for at least this additional reason.

Claims 16, 18 and 19 disclose specific relationships and proportions that are not disclosed, taught, or suggested by Johnson. Applicant directs the Examiner's attention to the arguments made above with respect to claims 3, 4, 7 and 8. Johnson does not disclose, teach or suggest the relationships and proportions recited in claims 16, 18 and 19. Claims 16, 18 and 19 are patentable for at least this additional reason.

Claim 14 recites particular relationship between the hardness of the host material and the hardness of the pin material requiring that the host material be "approximately 10 points higher on Rockwell Rc Scale than said second hardness". Johnson does not mention the hardness of the host material relative to the hardness of the pin material and certainly does not disclose, teach, or suggest the specific relative hardnesses recited in claim 14. Claim 14 is patentable over Johnson for at least this additional reason.

Claim 21

Claim 21 recites in pertinent part as follows:

an elongated cylindrical body having a longitudinal axis, a cylindrical pilot portion, and a retainer portion defined by a plurality of alternating helical lands and grooves, wherein said lands provide a retaining surface for engaging an inside surface of the hole;

said retaining surface being a radial distance from the axis that is greater than a radius of the pilot portion and occupying at least approximately 40% of the circumference of the retainer portion when the retainer portion is viewed in cross section perpendicular to said axis.

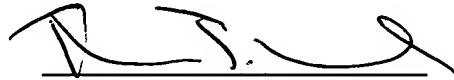
Johnson does not disclose, teach or suggest the recitations of claim 21, particularly with respect to the "cylindrical pilot portion" and the shape and characteristics of the "retainer portion." Claim 21 is patentable over Johnson for at least these reasons. Applicant directs the Examiner's attention to the arguments made above with respect to the teachings of Johnson.

For all the foregoing reasons, the applicant respectively requests allowance of claims 1 - 21.

If claims 1 through 21 are not in condition for allowance, Applicant requests withdrawal of the final action and re-opening of prosecution. Applicant also encourages the Examiner to contact the undersigned to discuss the potential for progress in this case.

Respectfully submitted,

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